Outsourcing Desktop Initiative for NASA (ODIN)

Desktop Computing Seat Selection Guidance

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1. Introduction and Program Overview

The ODIN Program transfers to the commercial sector the responsibility and risk for providing and managing the majority of NASA's desktop, server, and intra-Center communication assets and services. Each desktop in ODIN (referred to as a "seat") is bundled with Information Technology (IT) support services, including hardware and software acquisition, installation, maintenance, technology refreshment, administration, customer support, electronic mail (e-mail), print and file services, relocation, and training.

The ODIN Program objectives are as follows:

- Focus NASA civil service personnel on core Research and Development activities;
- Promote IT systems and product interoperability;
- Enhance and optimize service delivery; and
- Reduce cost and improve cost management and cost containment.

The ODIN Program provides services for the following Centers and program offices, as well as NASA Headquarters (HQ):

Human Exploration and Development of Space (Code M) Centers:

Marshall Space Flight Center (MSFC)
Kennedy Space Center (KSC)
Johnson Space Center (JSC)
Stennis Space Center (SSC)
Space Shuttle Program Office
Space Station Program Office

Office of Aerospace Technology (Code R) Centers:

Ames Research Center (ARC)
Dryden Flight Research Center (DFRC)
Langley Research Center (LaRC)
Glenn Research Center (GRC)

Office of Earth Science (Code Y) Center:

Goddard Space Flight Center (GSFC).

In 1998 NASA awarded Indefinite-Delivery Indefinite-Quantity (IDIQ) contracts to seven companies as a result of a multiple award Request for Proposal. These companies include Computer Sciences Corporation, Dyncorp, Federal Data Corporation, Affiliated Computer Services Government Solutions Group, OAO Corporation, Science Applications International Corporation, and Wang. The resultant contracts are considered Governmentwide Acquisition Contracts, and are available for use by any Agency (or designee) authorized to utilize GWAC's. Under the ODIN delivery order selection process (DOSP), each Center/Enterprise will select a single ODIN provider from the pool of ODIN contracts following a process that uses Delivery Order Selection Criteria (DOSC). Non-NASA agencies utilizing ODIN are required to comply with the DOSP.

This document will provide general guidance on seat selection approaches, with the overall objective to ensure that installations have all of the management information needed to properly assign desktop seat configurations according to employee work requirements, and further, to ensure that ODIN contractors are providing appropriate seat configurations. All program personnel are responsible for following this plan. This plan is part of the ODIN Program Plan suite of documents.

1.1 Purpose and Scope

The intent of this document is to provide ODIN delivery order holders (ODIN customers) guidance in determining an approach to the selection of 'seat' types offered in the ODIN contract to meet their mission and business goals. This document will identify different methodologies for seat selection in the outsourced environment, and provide guidance to the reader in the selection of a specific approach. Since there are numerous cases where a specific center or enterprise has deviated from seat types and/or service levels identified in the master contract, applicability of guidance and recommendations contained herein will be limited in scope to those seat types outlined in the master contract, and identified herein in Appendix A, "Desktop Seat Types."

1.2 Related Documents and Standards

The following documents and standards provide guidance to the ODIN Program and associated processes:

NPG 2800, Managing Information Technology

NPG 7120.5A, NASA Program and Project Management Processes and Requirements

NPG 2810.1, Security of Information Technology

Outsourcing Desktop Initiative for NASA (ODIN) Program Plan

Outsourcing Desktop Initiative for NASA (ODIN) Program Commitment Agreement

Outsourcing Desktop Initiative for NASA (ODIN) Program Representatives Board (OPB) Charter

Outsourcing Desktop Initiative for NASA (ODIN) Risk Management Plan

Draft Report on Audit of Configuration Controls in Desktop Outsourcing, Assignment Number A0000800

2. ODIN Scope

The contractor is required to deliver comprehensive, end-to-end desktop, server, and intra-Center communications services, including associated capital infrastructure improvements, as well as maintenance and enhancements to that infrastructure, throughout the term of the contract. ODIN is expected to provide the vast majority of desktop, server, and intra-Center communications IT capability at most NASA Centers and those external agencies choosing to use these contracts.

In general, desktop services are to be provided on a per "seat" basis where all required service components are bundled. Several different seat types are required to be provided, as described in the Service Model, Attachment E, in the ODIN contract. For all of the services, management of the necessary LAN communications infrastructure is expected to be bundled with each service offered. Server services provide capacity and functionality that are not already specifically bundled with the Desktop Services. A variety of intra-Center communication services are to be provided, such as telephone services, facsimile services, etc. These services are to be offered distinct from the bundled seat desktop services and server services as well as from each other. For all of these communications services, management of the necessary infrastructure is expected to be bundled with each service offered.

These services may be provided to Government civil servants, Government (on-site or near-site) contractors, off-site contractors, principal investigators, Universities through grants or cooperative agreements, GOCO organizations, and other Government agencies.

The Government reserves the right to add new seat types, service levels, and technologies in order to reduce cost, increase efficiency and performance, or any other reason found to be advantageous to maintaining NASA's IT environment. It is expected that technology which emerges during the term of contract and which is an integral part of the above services will be delivered to the Government through technology refreshment and other provisions of the contract. The Government intends for the services to conform, where possible, with those offered commercially and to evolving standards.

3. Organization

The NASA Chief Information Officer (CIO) has delegated responsibility to the Goddard Space Flight Center (GSFC) to implement ODIN. GSFC will use an intra-agency team consisting of a Program Manager (PM) and staff, a Contracting Officer for the master contracts, Delivery Order Contracting Officers, and Delivery Order Contracting Officer's Technical Representatives (DOCOTR). The PM is responsible for ODIN Program Operations. The PM is directly accountable to the NASA CIO and the NASA CIO Council for meeting ODIN program and performance objectives. Included in this responsibility is: ensuring contractor compliance with the terms and conditions of their contracts, implementing and ensuring compliance with Agency architectures and standards, assuring maintenance of interoperability and compatibility across the Agency, and validating that contractor offered systems and products are within the system and product performance specifications, Attachment N, ODIN Performance Specifications.

Both NASA and the ODIN contractors are encouraged to recommend additions, modifications, and deletions to Agency and Center IT policies, architectures, standards, and procedures. All proposed changes will be reviewed before implementation at the appropriate level (Agency or Center). It is the responsibility of the contractor(s) to raise adverse impacts to stability, cost, architecture, interoperability, compatibility or service. The contractor shall also review with NASA any planned system implementations, including hardware/software refreshment and application rollout, which could be reasonably expected to have an adverse impact on the stability of the existing IT environment. To assure maintenance of the NASA IT architectural configuration, the process set forth in paragraph 2.2.1 of NPG 2800 will be followed. The contractor shall bring recommendations for changes to the NASA IT architecture and standards to the attention of the ODIN PM, who will be responsible for ensuring the review and approval process is conducted in compliance with NPG 2800, and communicating results of that process to the contractor. When reviewing and approving recommendations for changes affecting ODIN, the CIO Representatives Board will be augmented by the ODIN Program Manager and the ODIN contractor Program Managers. To facilitate management of the ODIN Program and resolution of program issues that cannot be resolved at a lower level, the CIO Council, chaired by the NASA CIO, will be augmented as appropriate with senior ODIN contractor representatives.

Each Center will establish a Center level Configuration Control Board (CCCB), chaired by the Center CIO (or designee) and membership made up of at least the DOCOTR and the ODIN contractor's representative. Functions of the CCCB include approving proposed changes to local architectures and standards, which assure changes in local architectures and standards are consistent with Agency interoperability and compatibility standards. The Centers may use an existing or alternative mechanism that accomplishes the same results.

Each Center will have a DOCOTR. The DOCOTR is responsible for ODIN Center Operations, and is directly accountable to the ODIN Program Manager for meeting ODIN program and performance objectives, ensuring the contractors' compliance with the terms and conditions of their delivery orders, implementing and ensuring compliance with

Agency architectures and standards, and assuring maintenance of interoperability, compatibility across the Agency, and managing the local configuration. ODIN contractors shall coordinate system, product, and service rollouts with the DOCOTR to facilitate implementation to minimize impact to end-users.

The selection of systems, products, and services are the responsibility of the contractor. The contractor shall meet the requirements for interoperability and functionality and maintain configuration control of their specific Center environment. The configuration shall be current and available for NASA review and use, upon request. The ODIN contractors shall coordinate their system, product and service roll outs with the other ODIN Contractocs to assure Agency or Center level interoperability or functionality requirements are not compromised. Where the ODIN contractors cannot agree among themselves on matters affecting the interoperability or functionality of ODIN systems, the ODIN contractors shall establish and employ binding conflict resolution techniques, at their expense. This process shall not impact schedules, and the Government will not be a party to such conflict resolution. The contractor shall inform the PM as soon as practicable of any issue requiring binding conflict resolution. Desktop seat types have been designed and

4. Services Available

established to meet both the general purpose and scientific and engineering desktop computing requirements of most NASA personnel and NASA contractors. Each seat type comes with a comprehensive suite of services (including network services which are bundled with the desktop) and a set of IT characteristics (e.g., hardware and software acquisition, installation, maintenance, refreshment, administration, network access, customer support, relocation, training). These desktop services are bundled according to NASA's functional and performance requirements into one of several "service categories." This bundling includes any servers (e.g., email, print, file, and similar end user and domain based application servers) and/or "back office" products and services required to deliver full functionality to the desktop seats. The unit of purchase for these service categories is referred to as a "seat". Currently, nine service categories are required within the desktop service model; as shown in the Desktop Seat Table in Appendix A, for each of these service categories, standard services are denoted with the letter "S" and optional service levels, where available, are denoted by the letter "O," The options for each desktop seat type are with an "O" designator in the table. Only seat types with an "O" designator for a service level may order that optional service. Additional functionality to customize the seats is available through the Catalog of Services and Commercial Components (CSCC).

5. Seat Selection Strategies

NASA managers can assign employees any one of twelve desktop seats identified in the ODIN master contract; including five variations of General Purpose and seven variations of Scientific and Engineering. The various desktop seats differ by hardware features including, but not limited, to processor speed, hard disk storage and memory, and monthly seat prices. Service-level options (i.e., Return to Service, Local Backup and Restore, etc.) are identical for each seat type offering. Monthly seat prices are fixed for the duration of the delivery order period.

The desktop seat types defined in the ODIN service model are combinations of services at the appropriate level of response, plus the hardware platform required to provide existing and anticipated desktop usage and communication response times. The intent of the optional services levels is to allow seat customization to meet specific individual requirements that are not satisfied by the standard seat configuration of services, service level, or platform capability. These options result in alternate seat capabilities or service response and are to be priced as an incremental change to the standard seat price for each option.

As stated previously, the NASA CIO has delegated overall ODIN program responsibility to the ODIN Program Office at GSFC. In turn, the ODIN Program Office has delegated the seat assignment responsibility to the installations. The installations can employ either installation-wide or installation-component approach in meeting their seat assignment responsibilities. Preference for one approach over another does not preclude an installation or organization from using a combination of the two approaches to best meet the Agency's business and mission requirements. The primary considerations for selection and assignment of seat type should include the employee's work requirements, capability/performance relative to Agency interoperability standards and known capacity impacts (i.e., IFMP), and cost. Each approach is discussed below:

5.1 Installation-wide Approach

The installation-wide approach is essentially a standardization of seat types and, where possible, service levels across the installation. Based on their analyses of employees' desktop computing needs, the installation CIO (or designee) may conclude that a common computing platform will accommodate the computing needs of a majority of the user community. There are a number of considerations that influence this approach, including:

- Pricing - It is not uncommon for ODIN vendors to be able to leverage volume orders for similar platforms to achieve a more competitive price point. In turn, the vendors have passed this pricing advantage on to the government in the form of lower seat prices, or increased functionality for the same delivery order seat price.

- Interoperability - One of the primary goals for ODIN is achieving interoperability across the Agency. Common platforms (architectural uniformity) bring significant efficiencies with respect to enterprise-wide operating system and application software upgrades.

- Scalability - Setting standards for desktops and laptops around basic platforms maximizes scalability options. Scalability should not necessarily be viewed as an advantage. The most cost effective man-

ner to deliver capability to the desktop user is to buy the performance "up front," such that the end user has sufficient computing capacity/capability to last the full life cycle of the seat (until technology refreshment). This approach eliminates the high cost of labor involved in catalogue purchases and desk side visits required to upgrade and configure individual machines.

- Return to Service - A common platform approach results in increased familiarity among the desk side technicians, often resulting in shorter repair cycles and a reduction in outage time. A more homogeneous environment is conducive to an increased on-site spare parts inventory as well. Lastly, faster problem resolution results in increased end-user productivity.

- Reduced Overhead - A common approach to seat type and service level selection simplifies invoice reconciliation, and the overhead associated with the installation-component approach.

- Capability - The selection of a common capability across the enterprise brings with it the risk of either under- or over-powering employees' computing needs. The ODIN service model provides adequate flexibility to allow for the design of a common computing architecture that balances cost and platform capability.

5.2 Installation-component Approach

The installation-component approach delegates the seat assignment responsibility to managers (such as Directors of, Division Chiefs, and Branch Heads) in various organizational components. In this approach the seat selection decision is driven down to the lowest common denominator for making that decision. The chief benefits of this approach include:

- Capability - the installation component approach places an emphasis on purchasing only the capability needed to meet the individual employees' computing needs.

- Flexibility - This approach provides the flexibility to tailor seat type and service level selection to meet individual needs.

- Control - Lack of control over the end user configuration, whether real or perceived, is one of the biggest challenges of implemtning desktop outsourcing. Allowing users to have input into their seat selection and configuration serves as a method for mitigating some of this concern.

Centers choosing the installation-component approach need to be aware that it brings with it additional overhead, including:

- Complexity - The installation component approach incurs additional complexity and overhead in reconciling monthly invoices against a disparate seat subscription profile, and in ensuring the agency's interoperability objectives are met.

- Multiple platforms are more difficult to manage and can reduce user productivity because of the complexity of testing and integrating systems.

- Labor - The installation componenent approach runs the risk of becoming more labor intensive as user computing needs demand more capability/capacity, resulting in catalogue (peripheral and memory) purchases, and associated installation labor.

6. Summary

Standardization of seat assignment brings with it a number of efficiencies, even in the fixed cost environment of ODIN. Standards play an important role in managing support costs, but successful implementation of standards requires that IT managers follow at least two best practices.

First, management must ensure that standards extend beyond just hardware and software. Standards must be applied to how technology is configured, managed and supported. Standards must also be applied to the processes and procedures used to manage an enterprise networking environment.

Second, standards, must be strictly enforced where they make sense, but altered where they do not. A standard cannot be viewed as an end unto itself. Accordingly, an organization opting for either seat assignment approach should also consider:

- Identify where standardization is of economic or strategic advantage.
  - ◊ Set standards for desktops and laptops around common seat types to maximize scalability and achieve maximum interoperability.

- Implement flexible standards that can be waived for just cause.
  - ◊ The ultimate goal is organizational effectiveness, not 100% conformance.

The flexibility of the ODIN model also allows for aggressive negotiation with the ODIN provider. While standardization brings with it the risk of buying too much functionality for some users, economies associated with a large-scale, common-platform "build-to-order" approach brings prices more in line with the installation component approach. Life-cycle viability and user satisfaction also play a key role, and should factor into the seat selection approach. It is normal for platform workloads to increase over time (new applications, software "bloat", work items, such as spreadsheets, databases, increasing in size and complexity), and having sufficient latent capability available to accommodate these workload impacts until technology refresh avoids costly catalogue upgrades. Computers become "slow" when the size of a task gets sufficiently large enough to force the user to wait for the computer. If the task is smaller than this, the computer is fast enough for the user. It is therefore advantageous to ensure that the computer and user, as a pair, can accomplish the required task while operating at peak efficiency.

In summary, the ODIN model is designed to provide maximum flexibility by defining seat "bands" (see Appendix A), a method of stratifying the capabilities, and providing lines of demarcation from seat type to seat type. While this works in most cases, the reality of market availability often comes into play, creating overlaps among seat types (e.g. GP2 and SE1). This reduces the clarity in distinguishing one seat type from another, and often, with only modest price adjustments, the government can take a position of selecting the higher end seat for value added reasons, but at the same time presenting the appearance of "overbuying." It is incumbent upon the delivery order manager (DOCOTR) to be vigilant in identifying and advising their customers and center managers on the most cost-effective solution for their business and mission needs.

Appendix A. Desktop Seat Types

GP1 Seat Description

Functionality:

The client computer resources providing a standard interoperability software and network solution for office automation and desktop productivity enhancement needs. Functionality includes: word processing, spreadsheet, presentation graphics, electronic messaging (e-mail, calendaring, forms), Internet tools (WWW, news, FTP, Telnet, collaborative tools, etc.), and anti-virus.

Platforms in this seat are capable of running the minimum Agency and Center standard office automation software suite at acceptable performance levels and meet or exceed the manufacturer's recommended hardware requirements for each of the office automation software packages. GP1 platforms are capable of running NASA client-server applications such as IFMP.

Standard Services:

Service Type	Service Level	Typical service characteristics
Platform	PC/Mac-entry	Entry level PC/Mac desktop functionality
Application Software	Standard	Standard application software suite
HW Maintenance	Regular	Restore to service by close of next business day
Systems S/W Maint	Regular	Restore to service by close of next business day
Application S/W Support	Regular	Restore to service by close of next business day
Hardware Refreshment	Premium	System replacement every 3 years
Software Refreshment	Regular	Replace s/w load every 12 months
Moves/Adds/Changes	Regular	<= 5 moves/adds/changes completed within 2 work days
LAN Services	Regular LAN	Less or equal to 20 mbps
Int. Cust. Support/Help	Regular	Full, 12x5 6 am to 6 pm
Training	Basic	Familiarization with major upgrades
System Administration	Regular	User id, s/w distribution, config. Mgmt.
Shared Peripheral Services	Basic	Access to network b&w printers
File Services	Basic	Center standard server space
Local Data Backup and Restore	None	No local data backup and restore services
Desktop Conferencing	None	No desktop conferencing services
Loaner Pool Management	None	No loaner pool management services

GP2 Seat Description

Functionality:

The client computer resources required to perform general purpose business and administrative computing employing a variety of COTS and government provided application solutions. Functionality includes: business program development (e.g., Visual Basic, C++) and execution, statistical analysis, desktop publishing, desktop multimedia development, desktop databases (e.g., Access, FoxPro), and desktop graphics (e.g., Canvas, Corel Draw), as well as word processing, spreadsheet, presentation graphics, electronic messaging (e-mail, calendaring, forms), Internet tools (WWW, news, FTP, Telnet, collaborative tools, etc.), and anti-virus. In comparison to GP1, the GP2 seat is intended to fulfill the requirements of business applications and program development which require higher processing power, higher graphics capabilities, increased storage requirements, and the capability for increased network throughput.

Platforms in this seat are capable of running the minimum Agency and Center standard office automation software suite and the general purpose business and administrative COTS and government provided application solutions at acceptable performance levels and meet or exceed the manufacturer's recommended hardware requirements for each of the software packages.

Standard Services:

Service Type	Service Level	Typical Service Characteristics
Platform	UNIX-Mid	Mid-level UNIX workstation
Application Software	None	No standard S/W
HW Maintenance	Regular	Restore to service by close of next business day
Systems S/W Maint	Regular	Restore to service by close of next business day
Application S/W Support	Regular	Restore to service by close of next business day
Hardware Refreshment	Premium	System replacement every 3 years
Software Refreshment	Regular	Replace S/W load every 12 months
Moves/ Adds/Changes	Regular	<= 5 moves/adds/changes completed within 2 work days
LAN Services	Regular LAN	Less or equal to 20Mbps
Int. Cust. Support/Help	Regular	Full, 12x5 6 AM to 6 PM
Training	Basic	Familiarization with major upgrades
System Administration	Regular	User ID, S/W distribution, Config. Mgmt.
Shared Peripheral Services	Basic	Access to network B&W printers
File Services	Basic	Center standard server space
Local Data Backup and Restore	None	No local data backup and restore services
Desktop Conferencing	None	No desktop conferencing services
Loaner Pool Management	None	No loaner pool management services

GP3 Seat Description

Functionality:

The laptop computer resources providing a standard interoperability software for office automation and mobile productivity enhancement needs. Functionality includes: word processing, spreadsheet, presentation graphics, electronic messaging (e-mail, calendaring, forms), Internet tools (WWW, news, FTP, Telnet, collaborative tools, etc.), and anti-virus.

This seat is intended to fulfill the majority of NASA's requirements for portable computing. These requirements include support for the user who (1) needs full desktop capabilities from various locations within a Center (with ease of mobility) with seat functionality intact, (2) needs access to resources (e.g., e-mail, files) at the Center while away from the office, and (3) makes high quality presentations while on travel (e.g., connection to projection system). Optional capabilities which expand the portable computing environment when working in the office environment include a connection to a docking station or to a monitor. Users may order optional PDAs and palmtops to access Center resources locally or remotely through the CSCC.

Platforms in this seat are capable of running the minimum Agency and Center standard office automation software suite at acceptable performance levels and meet or exceed the manufacturer's recommended hardware requirements for each of the office automation software packages.

Standard Services:

Service Type	Service Level	Typical Service Characteristics
Platform	Laptop-Entry	Entry Level PC/Mac Laptop functionality
Application Software	Standard	Standard application software suite
HW Maintenance	Regular	Restore to service by close of next business day
System Maintenance	Regular	Restore to service by close of next business day
Application S/W Support	Regular	Restore to service by close of next business day
Hardware Refreshment	Premium	System replacement every 3 years
Software Refreshment	Regular	Replace S/W load every 12 months
Moves/ Adds/Changes	Regular	<= 5 moves/adds/changes completed within 2 work days
LAN Services	Remote-S	Standard Modem access to LAN
Int. Cust. Support/Help	Regular	Full, 12x5 6 AM to 6 PM
Training	Basic	Familiarization with major upgrades
System Administration	Regular	User ID, S/W distribution, Config. Mgmt.
Shared Peripheral Services	Basic	Access to network B&W printers
File Services	Basic	Center standard server space
Local Data Backup and Restore	None	No local data backup and restore services
Desktop Conferencing	None	No desktop conferencing services
Loaner Pool Management	None	No loaner pool management services

SE1 Seat Description

Functionality:

The client computer resources provides desktop services for a wide range of entry level scientific and engineering (S&E) service needs. The functionality is typically met by high-end PC/Mac desktops or portables or entry level UNIX platforms (including X-Terminals). Functionality includes: capability of running commonly used S&E applications (software development, GIS, CAD, CAE, CAM) as well as word processing, spreadsheet, presentation graphics, electronic messaging (e-mail, calendaring, forms), Internet tools (WWW, news, FTP, Telnet, collaborative tools, etc.), and anti-virus. Platforms in this seat are also capable of running/accessing the minimum Agency and Center standard office automation software suite at acceptable performance levels.

Standard Services:

Service Type	Service Level	Typical Service Characteristics
Platform	PC/Mac-High	High-end PC/Mac desktop functionality
Application Software	Standard	Standard application software suite
HW Maintenance	Regular	Restore to service by close of next business
Systems S/W Maint	Regular	Restore to service by close of next business
Application S/W Support	Regular	Restore to service by close of next business
Hardware Refreshment	Premium	System replacement every 3 years
Software Refreshment	Regular	Replace S/W load every 12 months
Moves/ Adds/Changes	Regular	<= 5 moves/adds/changes completed within 2 work days
LAN Services	Regular LAN	Less or equal to 20Mbps
Int. Cust. Support/Help	Regular	Full, 12x5 6 AM to 6 PM
Training	Basic	Familiarization with major upgrades
System Administration	Regular	User ID, S/W distribution, Config. Mgmt.
Shared Peripheral Services	Basic	Access to network B&W printers
File Services	Basic	Center standard server space
Local Data Backup and Restore	None	No local data backup and restore services
Desktop Conferencing	None	No desktop conferencing services
Loaner Pool Management	None	No loaner pool management services

SE2 Seat Description

Functionality:

The client computer resources provides desktop services for a wide range of mid-level S&E service needs. The functionality is typically met by a high-end PC/Mac or mid-level UNIX platform. Functionality includes: capability of running commonly used S&E applications (software development, GIS, CAD, CAE, CAM, visualization) as well as word processing, spreadsheet, presentation graphics, electronic messaging (e-mail, calendaring, forms), Internet tools (WWW, news, FTP, Telnet, collaborative tools, etc.), and anti-virus. Platforms in this seat are also capable of accessing the minimum Agency and Center standard office automation software suite at acceptable performance levels.

Standard Services:

Service Type	Service Level	Typical Service Characteristics
Platform	UNIX-Mid	Mid-level UNIX workstation
Application Software	None	No standard S/W
HW Maintenance	Regular	Restore to service by close of next business day
Systems S/W Maint	Regular	Restore to service by close of next business day
Application S/W Support	Regular	Restore to service by close of next business day
Hardware Refreshment	Premium	System replacement every 3 years
Software Refreshment	Regular	Replace S/W load every 12 months
Moves/ Adds/Changes	Regular	<= 5 moves/adds/changes completed within 2 work days
LAN Services	Regular LAN	Less or equal to 20Mbps
Int. Cust. Support/Help	Regular	Full, 12x5 6 AM to 6 PM
Training	Basic	Familiarization with major upgrades
System Administration	Regular	User ID, S/W distribution, Config. Mgmt.
Shared Peripheral Services	Basic	Access to network B&W printers
File Services	Basic	Center standard server space
Local Data Backup and Restore	None	No local data backup and restore services
Desktop Conferencing	None	No desktop conferencing services
Loaner Pool Management	None	No loaner pool management services

SE3 Seat Description

Functionality:

The client computer resources provides desktop services for a wide range of high level S&E service needs. The functionality is typically met by a high-end UNIX platform. Functionality includes: capability of running commonly used and advanced S&E applications software development, GIS, CAD, CAE, CAM, high performance visualization) as well as word processing, spreadsheet, presentation graphics, electronic messaging (e-mail, calendaring, forms), Internet tools (WWW, news, FTP, Telnet, collaborative tools, etc.), and anti-virus.

Platforms in this seat are also capable of accessing the minimum Agency and Center standard office automation software suite at acceptable performance levels.

Standard Services:

Service Type	Service Level	Typical Service Characteristics
Platform	UNIX-High	High-end UNIX workstation
Application Software	None	No standard S/W
HW Maintenance	Regular	Restore to service by close of next business day
Systems S/W Maint	Regular	Restore to service by close of next business day
Application S/W Support	Regular	Restore to service by close of next business day
Hardware Refreshment	Premium	System replacement every 3 years
Software Refreshment	Regular	Replace S/W load every 12 months
Moves/ Adds/Changes	Regular	<= 5 moves/adds/changes completed within 2 work days
LAN Services	Regular LAN	Less or equal to 20Mbps
Int. Cust. Support/Help	Regular	Full, 12x5 6 AM to 6 PM
Training	Basic	Familiarization with major upgrades
System Administration	Regular	User ID, S/W distribution, Config. Mgmt.
Shared Peripheral Services	Basic	Access to network B&W printers
File Services	Basic	Center standard server space
Local Data Backup and Restore	None	No local data backup and restore services
Desktop Conferencing	None	No desktop conferencing services
Loaner Pool Management	None	No loaner pool management services

Appendix B: Desktop Seats Table

Seat Types	GP1	GP2	GP3	SE1	SE2	SE3	MA1	MA2	NAD
System Provision:									
Platform									
None							S	S	S
PC/Mac desktops									
Entry-level	S								
Mid-level		S		O					
High-end				S	O				
Laptops									
Entry-level			S						
Mid-level			O						
High-end			O	O					
Unix desktop									
Entry-level				O					
Mid-level					S				
High-end						S			
ODIN Application Software									
None	O	O	O	O	S	S	S	S	S
Standard Application Software Suite	S	S	S	S	O	O			
Services:									
Hardware Maintenance									
None	O	O	O	O	O	O			S
Basic	O	O	O	O	O	O	O	O	O
Regular	S	S	S	S	S	S	S	S	O
Premium	O	O	O	O	O	O	O	O	O
Enhanced	O	O	O	O	O	O	O	O	O
Critical	O	O	O	O	O	O	O	O	O
System Software Maintenance									
None	O	O	O	O	O	O			S
Basic	O	O	O	O	O	O	O	O	O
Regular	S	S	S	S	S	S	S	S	O
Premium	O	O	O	O	O	O	O	O	O
Enhanced	O	O	O	O	O	O	O	O	O
Critical	O	O	O	O	O	O	O	O	O
ODIN-Appl Software Maintenance									
None				O	S	S	S	S	S
Basic	O	O	O	S	O	O			
Regular	S	S	S	O	O	O			
Premium	O	O	O	O	O	O			
Enhanced	O	O	O	O	O	O			
Critical	O	O	O	O	O	O			

Seat Types	GP1	GP2	GP3	SE1	SE2	SE3	MA1	MA2	NAD
Hardware Tech Refresh									
Basic	O	O	O	O	O	O			
Regular	O	O	O	O	O	O			
Premium	S	S	S	S	S	S			
Enhanced	O	O	O	O	O	O			
Software Tech Refresh									
Regular	S	S	S	S	S	S			
Enhanced	O	O	O	O	O	O			
Moves, Adds, Changes									
Regular	S	S	S	S	S	S	S	S	S
Enhanced	O	O	O	O	O	O	O	O	O
LAN Services									
No ODIN supplied network connection	O	O	O	O	O	O	O	O	O
Standalone	O	O	O	O	O	O	S	S	
Remote-S LAN access	O	O	S	O	O	O			O
Remote-W LAN access	O	O	O	O	O	O			O
Regular LAN access	S	S	O	S	S	S			S
Fast LAN access	O	O	O	O	O	O			O
Huge LAN access		O		O	O	O			O
Integrated Customer Support/Help									
Basic	O	O	O	O	O	O	O	O	O
Regular	S	S	S	S	S	S	S	S	S
Enhanced	O	O	O	O	O	O	O	O	O
Training									
None	O	O	O	O	O	O	S	S	S
Basic	S	S	S	S	S	S			O
System Administration									
Basic				O	O	O	S	S	S
Regular	S	S	S	S	S	S	O	O	O
Enhanced	O	O	O	O	O	O			
Shared Peripheral Services									
None	O	O	O	O	O	O	S	S	S
Basic	S	S	S	S	S	S			O
Regular	O	O	O	O	O	O			O
Enhanced	O	O	O	O	O	O			O
File services									
None	O	O	O	O	O	O	S	S	S
Basic	S	S	S	S	S	S			O
Regular	O	O	O	O	O	O			O

Seat Types	GP1	GP2	GP3	SE1	SE2	SE3	MA1	MA2	NAD
Enhanced	O	O	O	O	O	O			O
Local Data Backup and Restore Services									
None	S	S	S	S	S	S	S	S	S
Basic	O	O	O	O	O	O			O
Regular	O	O	O	O	O	O			O
Enhanced	O	O	O	O	O	O			O
Desktop Conferencing									
None	S	S	S	S	S	S	S	S	S
Basic	O	O	O	O	O	O			
Enhanced	O	O	O	O	O	O			
Laptop Loaner Pool Management									
None			S	S					
Basic			O	O					